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(71) Applicant: MOLECULAR STAGING, INC. [US/US]; 300 George Street, New Haven, CT 06511 (US).

(72) Inventors: DEAN, Frank, B.; 21A Pearl Street, Guilford, CT 06437 (US). FARUQI, A., Fawad; 985 Durham Road, Guilford, CT 06437 (US).

(74) Agents: PERRYMAN, David, G. et al.; Needle & Rosenberg, P.C., Suite 1200, 127 Peachtree Street, N.E., Atlanta, GA 30303-1811 (US).

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(54) Title: METHOD FOR REDUCING ARTIFACTS IN NUCLEIC ACID AMPLIFICATION

(57) Abstract: Disclosed are compositions and methods useful for reducing the formation of artifacts during nucleic acid amplification reactions. The method uses special oligonucleotides, referred to herein as template-deficient oligonucleotides, that cannot serve as a template for nucleic acid synthesis over part of their length. This prevents the oligonucleotides from serving as effective templates in the formation of artifacts. The disclosed method involves using a template-deficient oligonucleotide as at least one of the oligonucleotides (preferably a primer) in a nucleic acid amplification reaction, where the template-deficient oligonucleotide comprises one or more template-deficient nucleotides, preferably at or near the 5' end of the template-deficient oligonucleotide. The disclosed method is useful for reducing artifacts in any nucleic acid amplification reaction involving oligonucleotides. In a preferred form of the method the nucleic acid amplification reaction does not involve thermal cycling. The disclosed method is effective at reducing non-cycle oligonucleotide-based artifacts. Also disclosed are kits useful for reducing artifacts in nucleic acid amplification reactions. The disclosed kits include a template-deficient oligonucleotide, wherein the template-deficient oligonucleotide comprises one or more template-deficient nucleotides, and a nucleic acid polymerase.

# INTERNATIONAL SEARCH REPORT

Internal Application No
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A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 C12Q1/68

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC 7 C12Q

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)
EPO-Internal, WPI Data, PAJ, MEDLINE, BIOSIS

C. DOCUMENTS CONSIDERED TO BE RELEVANT

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[X] Further documents are listed in the continuation of box C.

[X] Patent family members are listed in annex.

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